

earlier appearance of an increased concentration in the blood following oral ingestion. Again, *lævulose per os* had a greater effect on the respiratory quotient than when given *per rectum*, whilst with dextrose the reverse appeared to be true, although it was less readily absorbed from the rectum than the former.

The author considers that the differences in the metabolic effects between oral and rectal administration cannot be explained by the absorption of the materials into the systemic venous system alone as distinct from an absorption into the portal system, since the former drains only the extreme lower end of the large bowel. He therefore suggests that the immediate fate of these materials may depend in part upon whether the liver is in an active condition or not.

This condition is presupposed following oral ingestion, but if the rectal administration occurs sufficiently long after the previous meal, it may be expected that this organ is in a state of relative quiescence. The idea that the liver may give off to the blood-stream a substance of the nature of an internal secretion has already been envisaged by some experiments of Cannon's on the existence of a substance causing acceleration of the denervated heart, which was only clearly demonstrated in animals digesting meat.

The work suggests lines for future research and at the same time indicates that if resort has to be made to rectal alimentation in a patient, alcohol and dextrose are the substances which should be chosen for this purpose.

### The Russian Geographical Society.

WE have received from the Russian State Geographical Society twelve parts of its *Izvestiya*, forming vols. 52-57, for the years 1916-1925. They contain a series of valuable contributions to the geography of the Russian dominions, and British geographers will gladly welcome the renewed activity of that important Society. The word 'Imperial' in the title of the Society was omitted in 1916 and has now been replaced by 'State.' That the conditions of publication in Russia are difficult are indicated by the poverty of the paper, the sparseness and inferior quality of the illustrations and the maps. In these respects the later volumes show a marked improvement, which encourages the hope that the journal will reach its former excellence. The volumes contain many important contributions, but they are rigidly confined to the Russian language, the only exception being that one paper has a title and a short summary in French. If the titles of the papers and the lists of contents were repeated in some western language, the accessibility of its contributions would be much increased. Some of the work has been delayed in publication; thus volume 57, pt. 1 (pp. 3-60), includes papers by Conradi, Kell, and Ghulten on the geological and geographical results of an expedition to Kamchatka in 1908-1910, and a discussion by Prof. Karakash of *Eoanthropus dawsoni* (vol. 52, 1916, pp. 673-714) has been generally overlooked in Great Britain.

Among the papers on physical geography are the discussion by S. C. Bergh (vol. 52, pt. 8, 1916, pp. 579-648) of the origin of loess; many contributions to glacial geography, including a study of the movements of glaciers in the Caucasus by P. Tzirulnikov (vol. 53, 1917, pp. 45-56, 5 pls.), two papers by Belyaev and Besedin (vol. 55, pt. 1, 1919, pp. 1-124) on glaciers in Darvaz from observations during an excursion by the Russian Geographical Society in 1919, and a catalogue by Tronov of the glaciers of the Altai (vol. 57, pt. 2, pp. 107-159). General problems connected with glaciation are discussed by Sobolov (vol. 56, pt. 1,

1924, pp. 101-140, and pt. 2, pp. 5-36) on the glacial formation of northern Europe with reference to the geo-morphology of the Russian plain. The evidence from the Caucasus as to the succession of glacial periods is adduced by Renngarten from the Valley of Assa in the northern Caucasus (vol. 57, pt. 2, 1925, pp. 53-106). I. N. Shamkov describes the climate of Abas-Fuman and its value as a health resort.

The papers on European geography are relatively few, but Alyabev (vol. 56, pt. 1, 1924, pp. 5-54) contributes an account of the Kurghalov Peninsula and the south coast of Finland, and their geographical relationship. Yakovlev (vol. 57, pt. 2, 1925, pp. 3-22) describes the relief of Leningrad and its effect on the inundations.

Shokalskii in a short paper discusses the acceptance of republics by the north-western Russian States (vol. 56, pt. 1, 1924, pp. 154-161), and A. Petrov discusses the physical geography of the Murmansk area (vol. 55, pt. 2, 1924, pp. 3-13).

Studies of the Siberian rivers are given by Sapozhnikov and Nitikin, dealing especially with the plant distribution on the lower valley of the Obi (vol. 55, pt. 1, 1923, pp. 135-180); and by Ghromov, who describes his work at the mouth of the Yenisei (vol. 56, pt. 2, 1925, pp. 107-118).

Contributions on Russian Turkestan include the papers by Spiridonov on the natural history of parts of the Kizil-Kuma (vol. 56, pt. 2, 1924, pp. 145-173), and Smirnova describes the western parts of the Kirghiz Territories (vol. 55, pt. 2, pp. 103-112); Pavlov describes the North Gobi Desert and a traverse of Mongolia (vol. 57, pt. 1, 1925, pp. 111-168).

Mushketov describes the eastern Ferghana and the Alai (vol. 53, 1917, pp. 83-137, 8 pls.), and also a journey in Narjensk and Kashgar (*ibid.*, pp. 138-166). There are some obituaries, including one of P. O. Rovinskii, dealing especially with his work in Serbia (vol. 52, 1916, pp. 515-542), and an appreciation by Sokolovskii of the geographical work of Philip Avril (vol. 57, pt. 1, 1925, pp. 67-98).

### Peat Investigation in Canada.

ABOUT eight years ago a Peat Committee was appointed by the Government of Ontario and the Federal Government of Canada, and was directed to find, if possible, a practical commercial method for converting raw peat into fuel. The Committee considered carefully all the more important processes for winning peat fuel which had been previously proposed, and concluded that the only practical commercial method of winning peat fuel is by excavating, mixing, spreading and forming the raw peat by

automatic machines. The peat blocks thus formed and spread are then to be dried in the air. Since this process decreases considerably the number of labourers required per ton of fuel, it is well adapted for countries such as Canada, where the cost of labour is high.

The Committee made a careful and exhaustive examination of the efficiencies of two large-scale excavating and spreading plants. One of these had been devised in Sweden by Anrep, and the other in



Canada by Moore. The two machines were provided with mechanical excavators, which, however, differed in detail, and with field-presses. The conveying of the peat pulp from its excavator to the drying ground was by means of tipping cars on a portable railway in the Anrep method, and by means of an automatic belt-conveyer in that of Moore. As a result of the trials, which are fully described in its final report, the Committee found that the best type of process is one which combines the excavating elements of the Anrep system with the conveying and spreading elements of Moore's.

Incidentally it was found that a shredding machine of the Jeffrey swing-hammer type, used for pulping kelp on the Pacific coast of America, is far more efficient as a macerator than those with knives and screws commonly employed in Europe. Two other conclusions of the Committee deserve the serious attentions of peat experts. The operations of excavating, macerating, forming and spreading can be efficiently performed by automatic machines, but there is no cheap automatic method of collecting dry peat sods from the spreading ground. Furthermore, with the introduction of automatic machines for winning the peat, the overhead charges have increased so much that they now amount to nearly half the total cost of the finished peat fuel.

The report of the Committee merits a careful study, not only because it describes the field results of actual large-scale experiments on the winning of peat fuel, but also because it gives in addition a comprehensive and authoritative account of the recent advances in the peat industry.

HUGH RYAN.

### University and Educational Intelligence.

BIRMINGHAM.—The following appointments have been made:—Dr. Edmund L. Hirst, to be a lecturer in the Department of Chemistry; Mr. Gordon Manley, to be assistant lecturer in geography; Dr. Oscar Brenner, to be part-time assistant in pathology and bacteriology.

The British Thomson-Houston Co. has presented two A. C. motors for use in the Coal Treatment Laboratory.

The Huxley Lecture is to be delivered by Prof. Elliot Smith on February 1, 1927.

CAMBRIDGE.—D. H. R. Rastall has been elected to a supernumerary fellowship at Christ's College. The following have been elected to represent the scientific faculties on the General Board of the Faculties: Mr. R. H. Fowler, Prof. C. E. Inglis, Dr. T. S. Hele, Mr. T. C. Nicholas.

The Governing Body of Emmanuel College offers to a research student commencing residence at the University in October 1927 a studentship of the annual value of 150*l.*, tenable at Emmanuel College for two years. The studentship will be awarded in July, and applications should be sent so as to reach the Master of Emmanuel (The Master's Lodge, Emmanuel College, Cambridge, England) not later than June 30. The award will be made on the evidence submitted by the candidates, which should include a statement of the proposed course of research, a brief account of the candidate's career up to the date of the application, and evidence of general ability and of special fitness for the proposed course of research.

LIVERPOOL.—Dr. W. S. Patton, lecturer on entomology in the University of Edinburgh, has been appointed to the Dutton Memorial chair of entomology at Liverpool as from January 1 next. Dr. Patton graduated in medicine at Edinburgh in 1901 and later studied in the University of Marburg. He joined the Indian Medical Service in 1902, from which he retired

with the rank of major in 1921. During the War he was entomologist to the Mesopotamian Expeditionary Force. He has acted as Director to the King Institute of Preventive Medicine in Madras and as Director of the Pasteur Institute of Southern India. He has recently been engaged in investigations in China, and has had charge of the Kala-Azar Commission of the Royal Society.

Prof. H. J. W. Hetherington, professor of moral philosophy in the University of Glasgow, has been appointed Vice-Chancellor of the University of Liverpool in succession to the late Dr. J. G. Adami. Prof. Hetherington was educated at Dollar Academy and the University of Glasgow, in which he distinguished himself in the Departments of Mental Philosophy, Economics, and Classics. From 1910 until 1914 he held a lectureship in moral philosophy in Glasgow and became a member of Merton College, Oxford. In 1914 he was appointed lecturer in philosophy in the University of Sheffield, and a year later became professor of logic and philosophy in University College, Cardiff. In 1920 he became Principal and professor of philosophy of University College, Exeter, in which positions he distinguished himself as an administrator. In 1924 he relinquished his post in Exeter to take the chair of moral philosophy in Glasgow University. He is thirty-eight years of age. Prof. Hetherington is the author of "International Labour Legislation" and has published, in conjunction with Prof. J. H. Muirhead, a study in social philosophy entitled "Social Purpose." He will assume the office of Vice-Chancellor at the beginning of the session 1927-28.

APPLICATIONS are invited by the Royal Society for the appointment of a Foulerton Research Studentship, value 700*l.* per annum. The duties of the student will be to conduct researches in medicine or the contributory sciences under the supervision and control of the management committee. The studentship will be tenable for three years, but may be renewed from year to year up to six years. Members of either sex are equally eligible, but must be of British nationality. Applications must reach the Royal Society, Burlington House, Piccadilly, W. 1, not later than March 1 next.

THE annual meeting of the Geographical Association will be held on January 6-8 at the London School of Economics, Houghton Street, Aldwych, W.C.2, under the presidency of Sir Charles Close, formerly Director-General of the Ordnance Survey. The programme includes a discussion on January 6 for university teachers of geography on research in geography (opened by Sir Henry Lyons), and an address by Mr. J. Fairgrieve to primary school teachers, and a visit on January 7 to the Science Museum, South Kensington, with an address by Prof. H. H. Turner on solar eclipses. There will also be four concurrent discussions on the morning of January 7, on geography in advanced courses, on broadcasting and nature-study respectively in geography, and on school journeys. Sir Charles Close will deliver his presidential address, "Population and Migration," on January 7, and later in the day Col. E. M. Jack, the present Director-General of the Ordnance Survey, will describe the work of his department. The annual dinner of the Association will be held on January 7, and on January 8 a visit to the geography room of the William Ellis School is being arranged. Prof. L. P. Abercombe of Liverpool is organising a visit on January 8-10 to see the changes taking place in east Kent. The honorary secretary of the Association is Prof. H. J. Fleure, Geographical Association, Marine Terrace, Aberystwyth.